

REMARKS/ARGUMENTS

The present amendment is submitted in an earnest effort to advance the case to issue without delay.

The claims have been amended to improve their form rendering them consonant with U.S. practice. For instance, claims 1 and 4 have been revised to provide proper Markush language. These changes were not submitted for any reasons of patentability. Likewise, the term "obtainable by" has been changed to "formed from". Again, this change is merely to conform the claims to that of U.S. practice but not for any reasons of patentability. New claims 5-7 recite relative mole% ratios of the two types of monomers. Support may be found in the specification at page 2 (last two lines) bridging to page 3 (line 2). Claim 8 reciting the weight of polymer in the oral composition finds support at page 5 (line 5). Claims 9 and 10 reciting the presence of zinc salts, and specifically zinc citrate has support at page 5 (last paragraph).

Claims 1-4 were rejected for obvious-type double patenting over co-pending U.S. applications Serial No. 10/665,710 and Serial No. 10/665,711. Applicant herewith submits a Terminal Disclaimer which is believed to overcome this rejection.

Claims 1-4 were rejected under 35 U.S.C. § 102(b) as anticipated by Mirajkar et al. (U.S. Patent 5,800,803). Applicant traverses this rejection.

Mirajkar et al. discloses an oral composition featuring an anionic copolymer to improve uptake onto dental tissue of noncationic antibacterial compounds. See the Abstract. A large number of monomers forming the anionic polymer are listed in the reference. These monomers are either anionic or nonionic in charge characteristic.

The present invention is based upon the requirement of at least a cationic monomer within the claimed copolymer. Mirajkar et al. does not disclose any cationic monomer. Even more so, the reference utterly fails to disclose the specific cationic monomers found in claim 1 (a). Clearly this reference does not anticipate the claims.

Claims 1-4 were rejected under 35 U.S.C. § 103(a) as unpatentable over Mirajkar et al. (U.S. Patent 5,800,803) taken with Wilkerson, III et al. (U.S. Patent 5,478,881). Applicant traverses this rejection.

The present invention is focused on oral care copolymers having at least some cationic character. The presently claimed polymers can be the combination of a cationic and a neutral (nonionic) monomer. The result is an overall cationic polymer. Where the cationic monomer is combined with an anionic one, the result is a polymer of amphoteric or zwitterionic character. In none of these combinations is the resultant polymer anionic.

By contrast, Mirajkar et al. is quite clear that their polymer is an anionic type. See the Abstract, column 3 (lines 25-26), and independent claims 1 and 8. Anyone skilled in the art considering this reference would be led to utilize an anionic polymer. Indeed, this reference teaches away from the use of other than anionic polymers. Applicant's discovery of a cationic polymer having deposition enhancement effect not only is non-obvious but is clearly taught away by the reference.

Wilkerson, III et al. discloses nonionic urethane type polymers. These are used for a variety of industrial purposes. Among the stated uses are paper coatings, textile sizings, textile printing pastes, petroleum drilling fluid additives and personal care

products. In the latter category are mentioned cleaners, laundry detergents, lotions and toothpastes. See column 1 (lines 15-24) and column 5 (lines 18-32). Thus, the use of urethane based polymers of this reference is quite wide. Toothpaste utility is mentioned only once and buried amongst many distinctly different product categories. Those skilled in the dental art would hardly be led to this reference based on a single mention of "toothpastes".

Moreover, Wilkerson, III et al. is essentially a nonionic urethane polymer reference. By contrast, Mirajkar et al. has neither a relationship to nor mentions urethane polymer chemistry. Those skilled in the art seeking to improve upon Mirajkar et al. would be more than unlikely to incorporate any teachings in Wilkerson, III et al. based on the different urethane chemistry and single mention of "toothpastes".

Yet Wilkerson, III et al. has even more fundamental deficiencies as a reference against the present claims. Buried at column 7 (lines 37-40) are three cationic monomers. The Examiner uses these as basis for suggestion that they could be combined with anionic/neutral monomers of Mirajkar et al.

The only one of the three cationic monomers of any structural relevance to present claim 1 is "vinylbenzyltrialkylammonium halide". Even this needle in the haystack of Wilkerson, III et al. is not clearly identical with the claimed (ar-vinylbenzyl)trimethylammonium chloride. Firstly, the claims cover "trimethylammonium" whereas the reference is simply "trialkylammonium". Secondly, the location of the "vinyl" in the reference "vinylbenzyltrialkylammonium" is unclear. Is the vinyl on the aromatic ring of benzyl or is it attached to the CH₂ in benzyl radical? The "(ar-vinylbenzyl)" of the present claims signifies the vinyl is attached to the aromatic ring

rather than to the methylene CH₂ of benzyl. Wilkerson, III et al. is totally unclear as to the presently claimed monomer structure of claim 1.

A combination of Mirajkar et al. in view of Wilkerson, III et al. would not render the instant invention obvious. The primary reference discloses only anionic polymers. Anyone skilled in the art would not have any incentive or suggestion to replace an anionic polymer with a cationic (or amphoteric/zwitterionic) polymer. For this reason, any cationic monomers found in the secondary reference would not be utilized by those skilled in the art to construct the anionic polymer described by Mirajkar et al. Further noted is that Wilkerson, III et al. is simply modifying a urethane polymer. The primary reference has nothing to do with urethane polymers. Those skilled in the art would have no incentive to select a co-monomer mentioned in connection with a urethane polymer for incorporation into the primary reference which is devoid of urethanes. Still further, there are only three cationic monomers mentioned in an extremely large list of anionic/nonionic monomers of Wilkerson, III et al. There is no apparent reason why anyone skilled in the art should select any of these three cationic monomers from amongst the many other monomers for incorporation into the primary reference. Finally, applicants' claim 1 covers very specifically identified cationic monomers. The only possibly equivalent of these cationic monomers is the reference listed "vinylbenzyltrialkylammonium halide". Yet there is no further identification of what the "trialkyl" grouping is nor of where the "vinyl" is arranged relative to the "benzyl" radical from among at least two possibilities (aromatic ring or methylene) attachments. Based on all these considerations, it would not be prima facie obvious to arrive at the presently claimed invention from a combination of Mirajkar et al. in view of Wilkerson, III et al.

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In view of the foregoing amendment, Terminal Disclaimer and comments,
applicant requests the Examiner to reconsider the rejection and now allow the claims.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Milton L. Honig", is written over a horizontal line.

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